

REMARKS

Schulz

Claims 1-2 and 6-9 have been rejected as anticipated by Schulz (US 5,880,538). Schulz states several times that, “One important feature of the invention is that the switching state of the circuit is unchanged when the user removes her hand from the vicinity of the operating electrode.” (col. 4, lines 56-59). For example, when the user unlocks the door by moving her hand toward the handle, the door does not re-lock when the user moves her hand away. (col. 3, lines 29-38). There is no “unbalanced bridge circuit” in Schulz. Figure 2e does not indicate a circuit that is balanced and unbalanced. Schulz does not disclose “activating a switch based upon whether the bridge circuit is balanced,” as claimed. Schulz will activate the switch based upon detecting a sufficient rate of change of capacitance and deactivate the switch based upon detecting a subsequent change of capacitance at a sufficient rate of change. (col. 4, lines 53-59; Figures 2a and 2e). Claim 1 has been amended to recite “activating and deactivating” the switch based upon whether the bridge circuit is balanced. Even if Schulz discloses a circuit that is balanced and unbalanced (which is disputed), Schulz does not both activate and deactivate based upon whether the circuit is balanced.

Desmarais

Claims 1, 2, 3 and 6-11 have been rejected as obvious over Desmarais (US 5,961,144).

The Examiner has rejected these claims as obvious but has not set forth a prima facie case of obviousness. Primarily, the Examiner has not set forth the differences between the claims and Desmarais. The Examiner states that the terms “balanced” and “unbalanced” are not contained in Desmarais, but argues that Desmarais does show “balanced” and “unbalanced,” which would seem to indicate that the Examiner

believes that no modification of Desmarais is necessary. It is unclear if the Examiner believes that some other modification of Desmarais is necessary and obvious. This also makes it difficult to respond to this rejection.

Desmarais discloses a circuit that operates both for determining the distance to the occupant (Figure 1) and for activating a horn (Figure 4). The distance to the occupant is determined based upon capacitance. There is no “switch” activated in Desmarais or any balanced vs. unbalanced determination. The proximity of the human body in Desmarais is a continuously variable function reflected in the signal sent to the controller (signal 58 in Figure 6 of Desmarais). Therefore, these claims are not obvious over Desmarais. New dependent claim 34 has been amended to clarify that the switch activates a vehicle accessory.

Desmarais does not disclose a switch that is activated based upon a rate of change of the capacitance, as recited by claim 7.

Schulz in view of Neuman

Claims 3, 4, 10-12, 21-28 and 33 have been rejected as obvious over Schulz (US 5,880,538) in view of Neuman (US 5,942,815). The Examiner argues that it would be obvious to use the switch of Schulz to activate a vehicle horn. However, the circuit of Schulz would be unacceptable for a vehicle horn because, as Schulz states several times, “One important feature of the invention is that the switching state of the circuit is unchanged when the user removes her hand from the vicinity of the operating electrode.” (col. 4, lines 56-59). Thus, if used for a horn, the horn would remain on even after the user’s hand was moved away. This would not be an acceptable vehicle horn for users, who expect the horn to cease when they remove their hand. The Examiner argues that the user could turn the horn off by moving his hand back to the electrode, but this would not be *acceptable* operation of a vehicle horn. For an obviousness analysis, it is not sufficient

to just hypothesize some possible way of making the horn work - - it has to be an obvious way and it would not be obvious to one of skill in the art to make a horn operate in such an odd, two-step manner. This is not how any vehicle horn currently operates. It would not be obvious to produce a vehicle horn switch that operates this way because it would be so undesirable. Therefore, it would not be obvious to use the Schulz circuit as a horn switch.

Claim 10 recites that the switch deactivates the power device based upon no user hand being detected near the electrode. As explained above, in Schulz, the user can move their hand away without deactivating the device. As shown in Figure 2e of Schulz, the switch is deactivated before the user's hand is moved away (Figure 2a).

With respect to claim 21, the Examiner recognizes that the Schulz circuit does not deactivate when the user's hand is moved away, and that it would be unsuitable to have a horn that does not deactivate when the user's hand is moved away. However, there is no suggestion or motivation of how to modify Schulz to do so. Since a primary object of the Schulz circuit is that the circuit does not deactivate when the hand is moved away, one of skill in the art would recognize that the Schulz circuit is simply unsuitable for a vehicle horn. It is easy in Neuman to deactivate the horn when the user stops applying pressure to the flexible capacitor. One of skill would not learn anything from Neuman about how to modify Schulz, since they are completely different types of circuits.

With respect to claim 24, again the Schulz circuit is unsuitable for a horn switch and there is no apparent way of modifying this circuit without completely overhauling it and failing to achieve the objects of the Schulz invention.

With respect to claims 26 and 33, Schulz does not disclose oscillation at different frequencies. The oscillator 8 of Schulz does not change frequency. The discussion of cut-off frequencies in column 4, lines

13-40 when describing the resistors and capacitors does not mean that they have an oscillating input. In fact, as shown in Figures 2a-e, there are no oscillating signals passing through these components.

Further with respect to claim 33, Schulz does disclose activation based upon rate of change of capacitance, but not activation based upon rate of change of the frequency of the capacitance, as claimed.

If any fees or extensions are due, please charge Deposit Account 50-1482.

Respectfully submitted,

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